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Fig.1

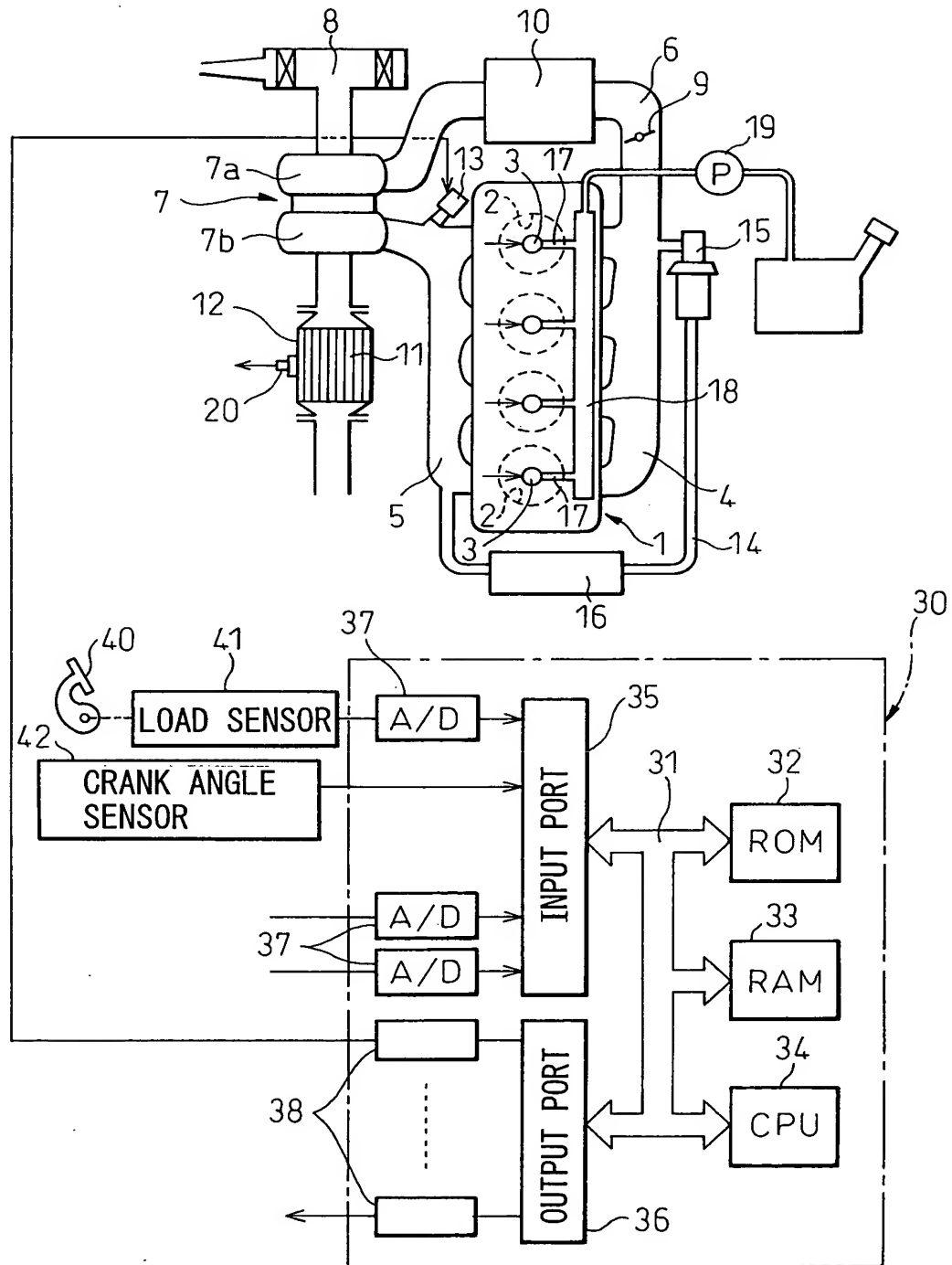


Fig. 2a

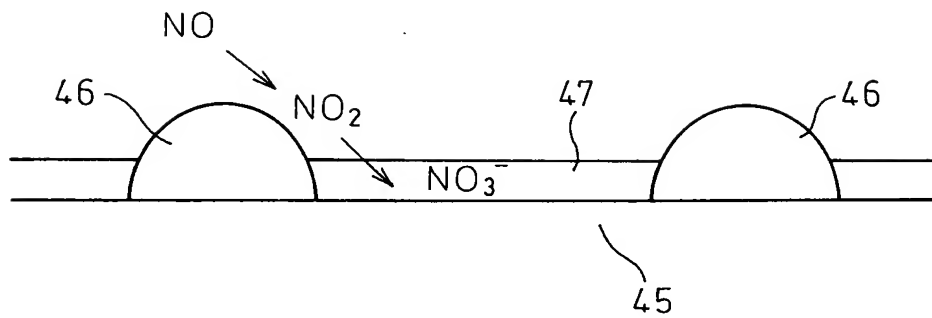
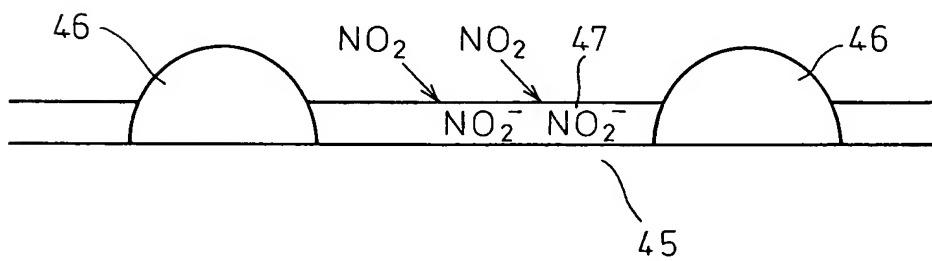


Fig. 2b



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Fig.3

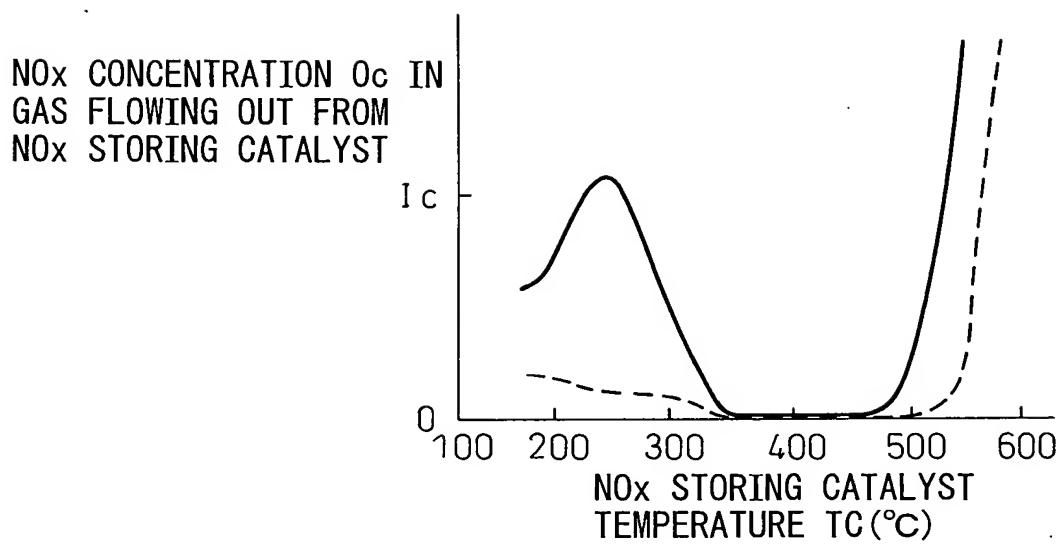
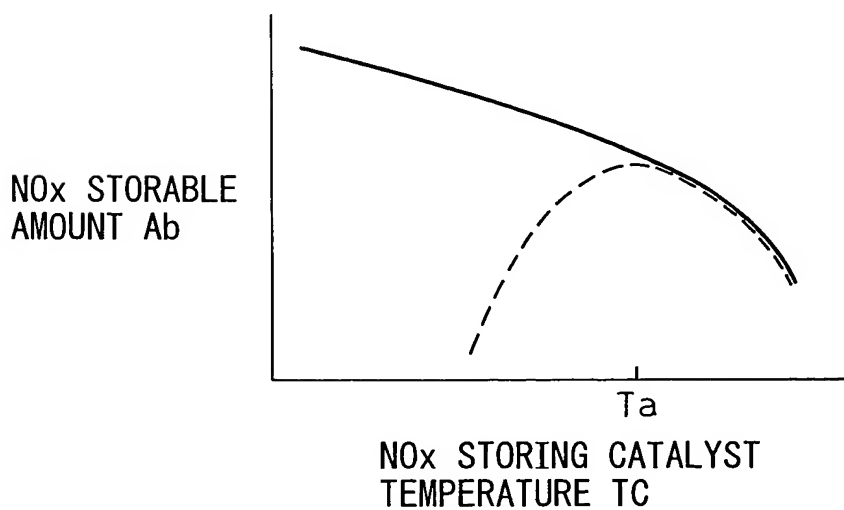


Fig.4



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Fig. 5

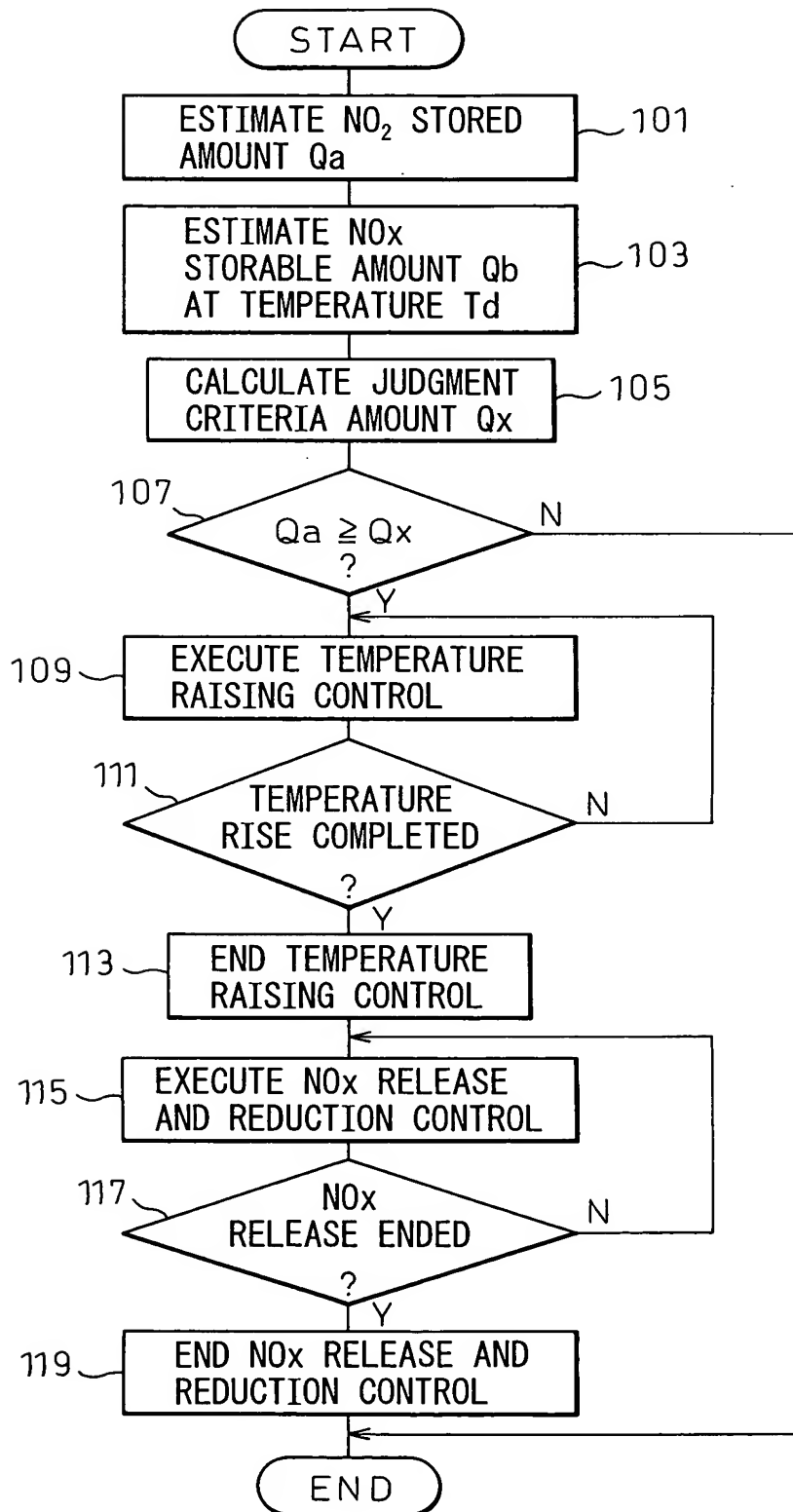


Fig.6

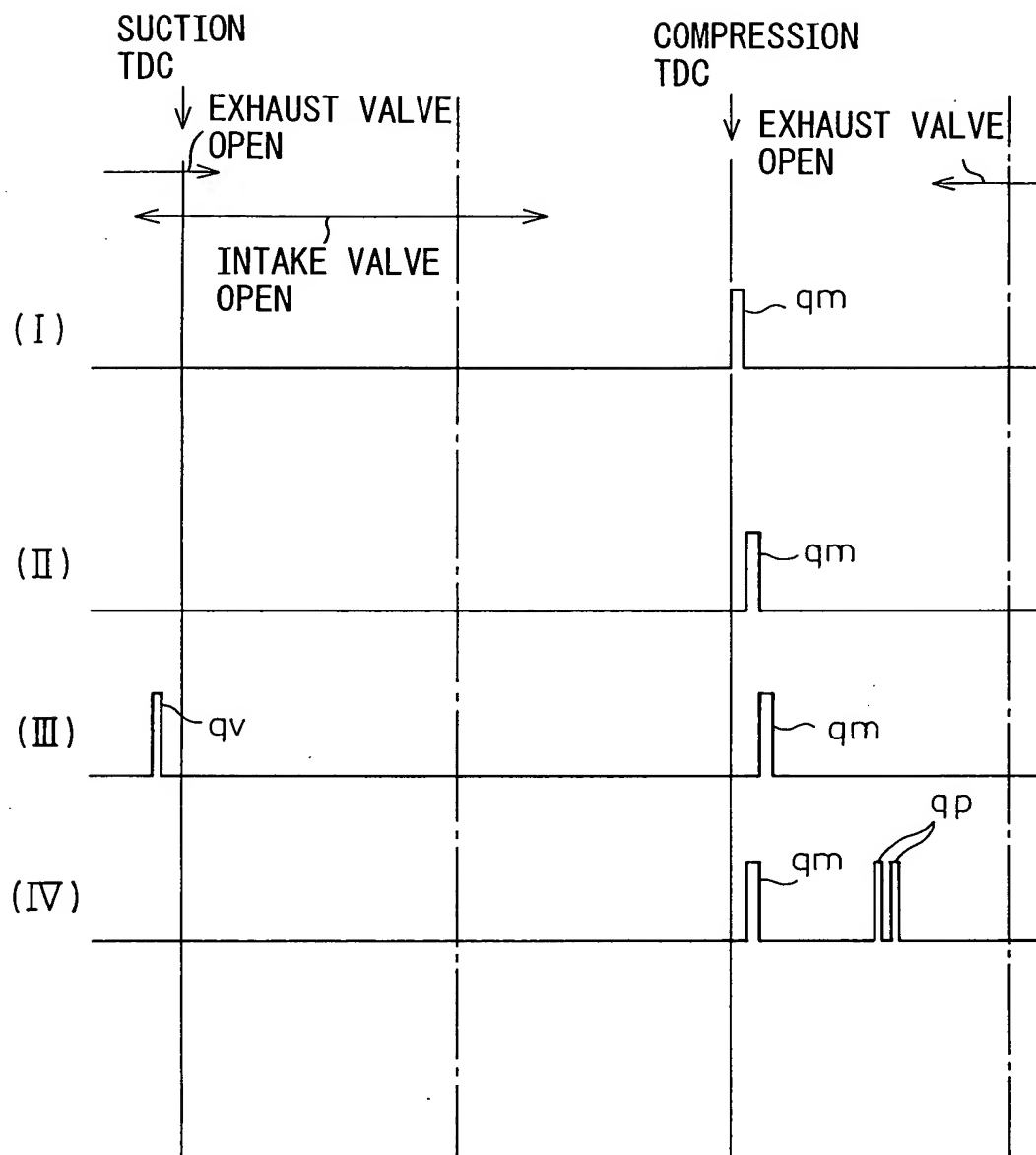


Fig.7

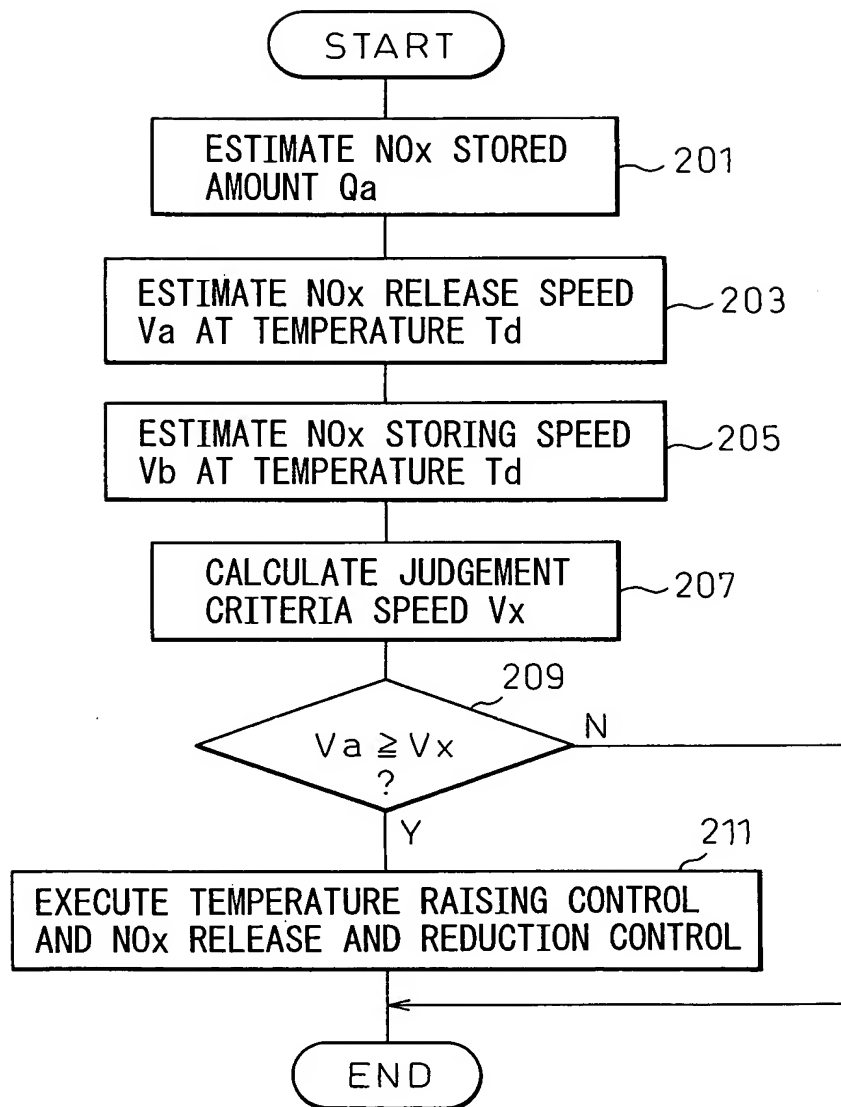


Fig.8a

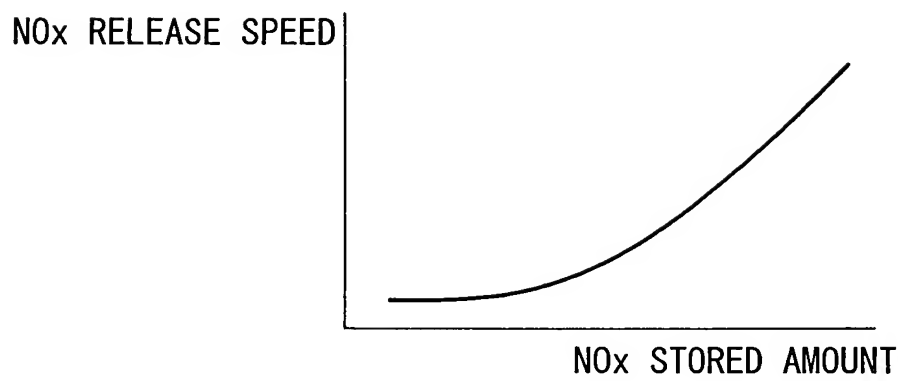
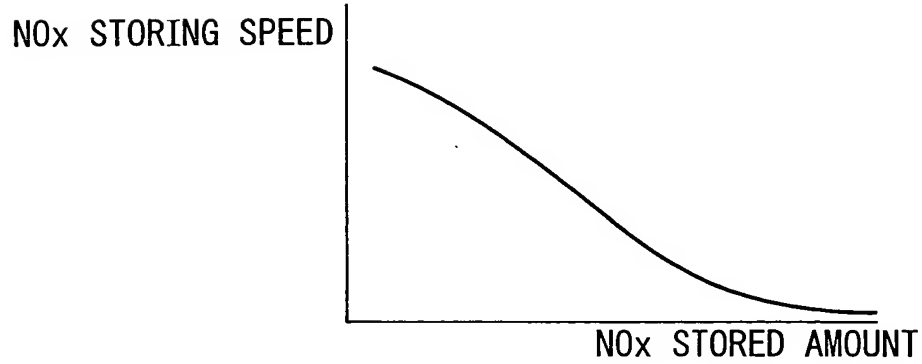


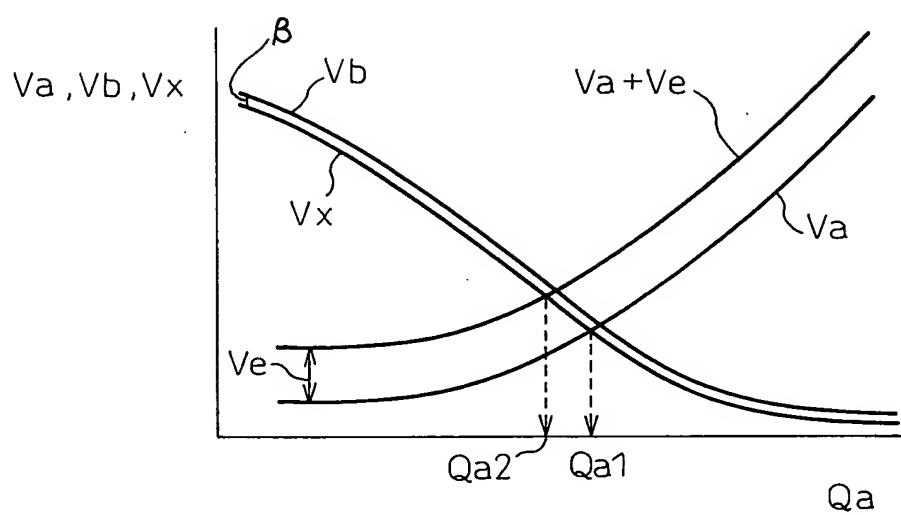
Fig.8b



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graph TD; START([START]) --> 301[ESTIMATE NO2 STORED AMOUNT Qa]; 301 --> 303[ESTIMATE NOx RELEASE SPEED Va AT TEMPERATURE Td]; 303 --> 305[ESTIMATE NOx EXHAUST SPEED Ve FROM ENGINE]; 305 --> 307[ESTIMATE NOx STORING SPEED Vb AT TEMPERATURE Td]; 307 --> 309[CALCULATE JUDGEMENT CRITERIA SPEED Vx]; 309 --> 311{Va + Ve ≥ Vx ?}; 311 -- Y --> 313[EXECUTE TEMPERATURE RAISING CONTROL AND NOx RELEASE AND REDUCTION CONTROL]; 311 -- N --> 313; 313 --> END([END]);
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The flowchart illustrates the process for NOx release and reduction control. It begins with a 'START' terminal, followed by a sequence of processing steps: 'ESTIMATE NO<sub>2</sub> STORED AMOUNT Qa' (301), 'ESTIMATE NO<sub>x</sub> RELEASE SPEED Va AT TEMPERATURE Td' (303), 'ESTIMATE NO<sub>x</sub> EXHAUST SPEED Ve FROM ENGINE' (305), 'ESTIMATE NO<sub>x</sub> STORING SPEED Vb AT TEMPERATURE Td' (307), and 'CALCULATE JUDGEMENT CRITERIA SPEED Vx' (309). A decision diamond (311) evaluates the condition  $Va + Ve \geq Vx$ . If the condition is 'Y' (Yes), the process proceeds to 'EXECUTE TEMPERATURE RAISING CONTROL AND NO<sub>x</sub> RELEASE AND REDUCTION CONTROL' (313). If the condition is 'N' (No), the process also proceeds to step 313. Finally, the process ends at the 'END' terminal.

Fig.10



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LIST OF REFERENCE

- 3 ... fuel injector
- 4 ... intake manifold
- 5 ... exhaust manifold
- 7 ... exhaust turbocharger
- 11 ... NO<sub>x</sub> storing catalyst
- 13 ... reducing agent supply valve